

# TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

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November 20, 2006

OK

TO: Internal File

THRU: Wayne Western, Team Lead *Wllw*

FROM: Priscilla Burton, CPSSc, Environmental Scientist III *PWB by an*

RE: Revised Appendix X and GVH #5B, 7A, 8A, UtahAmerican Energy, Inc., Centennial Project, C/007/0019, Task ID #2698

## SUMMARY:

Appendix X is being revised to indicate three additional gob vent holes to be drilled in 2006: GVH 5B, 7A, and 8A. Topsoil was stripped from the disturbed area where site GVH 7A will be located. Site GVH 5B will encompass area previously disturbed for a gas line, consequently topsoil salvage will be limited to available material. Site 8A is an undisturbed site. Soils information was not gathered from the immediate vicinity of site 8A, due to the unexpected and urgent safety requirement to drill the additional holes above longwall panel #7 before winter weather hits.

Five holes were drilled in 2005: (GVH #1, 3, 4, 5, & 6. Four additional holes were drilled in 2006: GVH#5A, 7, 8, and 9. All existing gob vent holes are located within the permit boundary on privately held surface in T. 12 S., R. 11 E. in Sections 1, 31, and 36 (Sec. 110). Locations are shown on Figure 1-1 of Appendix X. The well sites, the underground mining panels and the surface ownership are illustrated on Figure 1-1. Fig. 1-1 shows a total of 21 existing and proposed gob vent hole locations, indicating that there will be a vent hole every 8-900 ft. above future panels #8 and #9.

The Division should request confirmation of contemporaneous reclamation of GVH 1, 3, 4, 5, and 6, 7, 8, and 9 (mud pits and staging areas). Confirmation that these areas have been stabilized to handle spring thaws is the responsibility of the Division and will provide peace of mind to the landowners, as well.

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**TECHNICAL ANALYSIS:**

## **ENVIRONMENTAL RESOURCE INFORMATION**

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

## **SOILS RESOURCE INFORMATION**

Regulatory Reference: 30 CFR 783.21; 30 CFR 817.22; 30 CFR 817.200(c); 30 CFR 823; R645-301-220; R645-301-411.

### **Analysis:**

Appendix X is being revised to indicate three additional gob vent holes to be drilled in 2006: GVH 5B, 7A, and 8A. Topsoil was previously stripped from the disturbed area where site GVH 7A will be located. Site GVH 5B will encompass area previously disturbed for a gas line as well as undisturbed soils that resembles site 5A. Topsoil salvage at 5B will be limited to available material. Site 8A is an undisturbed site. Soils information was not gathered from the immediate vicinity of site 8A, due to the unexpected and urgent safety requirement to drill the additional holes above longwall panel #7 before winter weather hits.

Soils at site 8A are likely similar to similar locations that were surveyed on the plateau. And some general information for the map unit is available from the Carbon County Soil Survey (Sheet No. 10). Site 8 A is situated immediately adjacent to the right fork of Antone Creek, a tributary of Minnie Maude Creek. The Carbon County Soils map unit is 63, Midfork Family, Podo Association. Site 8A was characterized as a sagebrush/grass vegetation type (see Attachment 3-1 for photographs of the sites).

The gob vent holes are located within the permit boundary on privately held surface in T. 12 S., R.11 E. (Sec 110 and Fig. 1-1). Carbon County Soil Survey information indicates that vent holes fall within Map Units 7 (Beje – Trag Complex), 63 (Midfork Family – Podo Association), 117 (Trag - Beje – Senchert complex) and 105 (Senchert family-Senchert complex). Attachment 2-1 provides Order 3 level information from the 1988 Carbon County Soil Survey and the site specific Order 1 description. Laboratory analysis of the representative pedons are found in Attachment 2-1. The information provided in the application meets the requirements for baseline soil survey, description, laboratory analysis and productivity information.

GVH #3, 4, 7, 7A, 8, and 9 are on gently sloping terrain on top of ridges at elevations between 8,400 and 8,600 ft. The soils are listed in the Carbon County Soil Survey as Midfork

Family (Map Unit 63) and Senchert Family (Map Unit 104). Site 8A also falls in Map Unit 104, Senchert Family, although it is positioned at a topographic low point, along the Right Fork of Antone Creek at an elevation of 8400 ft. The soils to be disturbed at these sites are Mollisols, meaning they have a well developed, dark colored, base-rich topsoil horizon extending to a depth of 7 inches (Midfork) or 24 inches (Senchert). The subsoil is a gravelly loam (Midfork) or clay loam (Senchert). With the exception of GVH #8, these soils have 15 - 22% rock fragments on the surface. Vegetation includes aspen, sagebrush, grasses, vetch, lupine and other forbs.

GVH #1, 5, 5A and 6 are located on concave slope of the ridge. These sites are located in Trag soil (Map unit 117) and are also mollisols. The Trag soil has a 24 – 26 inch topsoil horizon over a clay subsoil (C horizon). The soils have no rock fragments. GVH 5 differs from GVH 1 and GVH 6 in that the C horizon has little carbonate content (no effervescence). The vegetation includes snowberry, sage, rabbitbrush, flax, grasses, lupin, quaken aspen.

The Senchert soil is in the High Mountain Loam (Thurber Fescue) range site. The senchert soil is in the High Mountain Loam (Aspen) woodland site. The Trag-Beje-Senchert complex contains the Mountain Loam (Salina Wildrye)-Mountain Shallow Loam (Mountain Big Sagebrush)-High Mountain Loam (Aspen) woodland range sites. In a normal year production from all these range sites is expected to be between 1,200 and 1,500 lbs/ac dry weight. In a favorable year the productivity would be expected to increase to 2,000 lbs/ac dry wt. Attachment 3-1 provides more specific information for the gob vent hole productivity.

#### **Findings:**

Information provided meets the requirements of Environmental Resources -Soils.

### **PRIME FARMLAND**

Regulatory Reference: 30 CFR 785.16, 823; R645-301-221, -302-270.

#### **Analysis:**

The site is undeveloped rangeland at an elevation of 8,500 ft., with no developed water resources. There is no prime farmland at this location.

#### **Findings:**

The Division finds that there is no prime farmland at the location of the gob vent holes.

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## OPERATION PLAN

### TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-230.

#### Analysis:

##### Topsoil Removal and Storage

Topsoil salvaged from site 8A will be sampled for baseline analysis at the time of disturbance. There has been no change to the operations procedure described in Sec. R645-301-230 for salvaging and stockpiling soils. The approved plan indicates 18 inches of topsoil will be salvaged and stored in a topsoil stockpile (Section 231.100). When less than 18 inches of topsoil is available, six inches of subsoil may be utilized in berms surrounding the site (Section 232.500).

#### Findings:

The information provided meets the requirements of R645-301-230 for topsoil and subsoil salvage.

## RECLAMATION PLAN

### TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-240.

#### Analysis:

##### Redistribution

There has been no change to the reclamation procedure described in Section R645-301-240.

#### Findings:

The information provided meets the requirements for topsoil and subsoil replacement.

## **HYDROLOGIC INFORMATION**

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

### **Analysis:**

#### **Acid- and Toxic-Forming Materials and Underground Development Waste**

##### **Gob Vent Holes Amendment X**

There has been no change to the information provided in Section 731.300 for identification and burial of acid/toxic forming materials.

### **Findings:**

The information provided meets the requirements of R645-301-731.311 for identification and burial of acid/toxic forming materials.

## **CONTEMPORANEOUS RECLAMATION**

Regulatory Reference: 30 CFR Sec. 785.18, 817.100; R645-301-352, -301-553, -302-280, -302-281, -302-282, -302-283, -302-284.

### **Analysis:**

#### **General**

There has been no change to the information presented in Chapter 2 concerning contemporaneous reclamation.

### **Findings:**

The information provided meets the requirements for contemporaneous reclamation (R645-301-352) and sediment control as described in R645-301-532.

## **STABILIZATION OF SURFACE AREAS**

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Regulatory Reference: 30 CFR Sec. 817.95; R645-301-244.

**Analysis:**

There has been no change to the information provided in Sec. 234.200, Section 242, Sec. 527.100 and Section 244.300.

**Findings:**

The information provided in the application meets the requirements of R645-301-244 for soil stabilization.

**RECOMMENDATIONS:**

Approval is recommended.

The Division should request confirmation of contemporaneous reclamation of GVH 1, 3, 4, 5, and 6 (mud pits and staging areas).